

terms and substance of proposed rules or a description of the subjects and issues involved in the proceeding, or both. *Northwest Airlines v. Goldschmidt*, 645 F.2d 1309 (8th Cir. 1981); *Buckeye Cablevision, Inc. v. FCC*, 387 F.2d 220 (D.C. Cir. 1967). Indeed, an agency is allowed, even expected, to modify proposed rules to account for the public comment it receives without the necessity to issue a further notice of proposed rulemaking. *Spartan Radiocasting Co., v. FCC*, 619 F.2d 314 (4th Cir. 1980).

In this instance, on February 28, 1997, the Commission issued an NPRM in which, inter alia, the Commission requested comment on a variety of issues affecting its competitive bidding procedures. The NPRM explicitly provided, at para. 4, that among the issues on which the Commission was seeking comment was whether to modify its installment payment rule and whether to adopt "schedules" of installment payment plans and bidding credits for which designated entities qualify.<sup>34/</sup> At paragraph 18, the Commission sought comment whether the rules adopted in this proceeding "should supersede all existing, service-specific competitive bidding rules for future auctions," and proposed, inter alia, that this action would affect all services that are subject to pending proceedings.

Following the NPRM's issuance, the Commission received several proposals for modification of PCS C and F Block payment

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<sup>34/</sup> With respect to installment payments, the Commission specifically sought comment on whether it should offer higher bidding credits, or adopt a schedule of payment plans with various terms and interest rates. NPRM at paras. 34-36, 39-40.

arrangements. *Public Notice*, at 1. The Commission recognized that the issues raised in these proposals corresponded with issues under consideration in the ongoing proceeding in WT Docket 97-82. As a result, the Commission specifically included those proposals in this proceeding. *Id.* It also made clear that those specific proposals were under consideration and requested comment on those and other alternative proposed modifications to its installment payment plans for the C and F-Blocks. *Id.*

The *NPRM* requesting comment on payment plan modifications provided sufficient notice to permit revision of existing C-Block payment plans. The *Public Notice* and associated request for comment provided an additional level of notice. While that was not necessary, it serves to remove any question regarding the adequacy of the Commission's notice regarding its proposal now. See *Action for Children's Television v. FCC*, 564 F.2d 458, 471 (D.C. Cir. 1977); *Omnipoint Corporation v. FCC*, 78 F.3d 620, 629-30 (D.C. Cir. 1996). See also *Fund for Animals v. Frizzell*, 530 F.2d 982, 988-89 (D.C. Cir. 1975) (public statements from Fish and Wildlife Service had provided notice to appellants of the proposed agency action).

**B.    The Commission Has All Authority  
      Necessary to Modify Payment Obligations**

In conveying auction authority to the Commission, Congress specifically tasked the Commission to develop and rapidly deploy new technologies, products, and services for the public benefit without administrative or judicial delay, to promote economic

opportunity and competition, to ensure that new and innovative technologies are readily accessible to the public by "avoiding excess concentration of licenses, by disseminating licenses among a wide variety of applicants, including small businesses, rural telephone companies, and businesses owned by members of minority groups and women". 47 USC §309(j)(3)(A) and (B). Licenses awarded pursuant to the C and F-Block auctions will further achievement of these goals. Absent grant of the restructuring relief sought here, however, it is unlikely that any of these goals will be realized fully. Substantively, restructuring of the payment obligations is clearly within the Commission's discretion. After all, Congress expressly delegated to this Commission the authority to conduct spectrum auctions, and to design the auctions -- and to invite design of auctions initially established by the Commission. 47 U.S.C. Sec. 309(j).

One need not focus only on auction-related statutory and code provisions to appreciate that the Commission has all legal authority necessary to restructure C and F Block payments. On a much broader scale, the rule changes here being considered fall squarely within that general rulemaking authority granted the Commission by 47 U.S.C Sec. 303(R).<sup>35/</sup> Moreover, 47 U.S.C. Sec. 4(i) vests the Commission with authority to make rules and

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<sup>35/</sup> Among other things, this section expressly provides the Commission with authority to "[m]ake such rules and regulations and prescribe such restrictions and conditions...as may be necessary to carry out the provisions of the Act...."

regulations not inconsistent with the Communications Act which are necessary to the execution of its functions. This is a very broad grant of discretion to the Commission with respect to its procedures and processes to effectuate its duties. Reviewing courts have consistently found this section to provide the Commission with ample authority to revise rules as necessary to ensure achievement of statutory responsibility. *FCC v. Midwest Video Corp.*, 440 US 668,706 (1979). Here the restructuring of installment payment terms is within the Commission's discretion because such restructuring is necessary to ensure competition in the industry and prevent undue concentration of broadband wireless service providers--all as directed by Congress.

Section 4(i) also unquestionably provides the Commission with authority to revise its rules, even after the conduct of auctions. See, e.g., *Mobile Communications Corporation of America v. FCC*, 77 F.3d 1399 (D.C. Cir. 1996), where the D.C. Circuit upheld an FCC determination to change radically the "payment terms" of a narrowband PCS pioneer preference winner after the preference had been awarded. See also *Greater Boston Television Corp. v. FCC*, F.2d 841, 852 (D.C. Cir. 1970), where the D.C. Circuit articulated clearly the applicable legal doctrine governing permissibility of rule changes:

"An agency's view of what is in the public interest may change, either with or without a change in circumstances," as long as the agency "suppl[ies] a reasoned analysis indicating that prior policies and standards are being deliberately changed, not casually ignored."

In view of the above, there is no question but that the Commission possesses all authority necessary to effectuate the revised payment plans here at issue.<sup>36/</sup>


**VI. Conclusion**

For these reasons, NextWave urges the Commission to expeditiously restructure its C Block payment plans as set forth above.

Respectfully submitted,

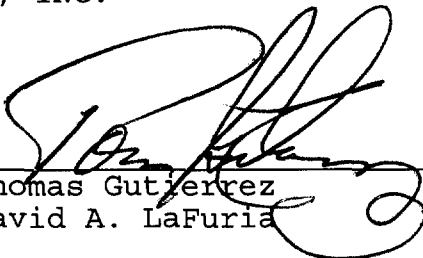
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<sup>36/</sup>

The Commission's authority extends to grant of that portion of restructuring relating to the extension of license terms to 20 years. Congress has vested the Commission with unlimited discretion to set license terms for all non-broadcast services. (Broadcast license terms are statutorily limited to eight years. See 47 U.S.C. Sec. 307 (c)(1).) The Commission has previously exercised its discretion to extend license terms where circumstances so justified. See, e.g., *Common Carrier and Satellite Licensing Procedures*, 48 Fed. Reg. 27251 (June 14, 1983) (extending all PLMS license terms for five additional years). See also *Revision of Direct Broadcast Satellite Service Rules*, 11 FCC Rcd 1297, para. 71 (1995).

Appendix A

**NextWave Telecom Inc.  
Overview of Telecommunications Financing Considerations  
June 1997**

**BT Wolfensohn**

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**NextWave Telecom Inc.**

**Overview of Telecommunications Financing Considerations**

**June 1997**

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## **Table of Contents**

Background and Overview of Telecommunications Financing Considerations

Section I.           The Financial Life-Cycle of Telecommunications Ventures

Section II.          Telecommunication Company Case Studies

Section III.         Considerations for C-Block Licensees



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## **Background**

BT Wolfensohn, a division of BT Securities Corporation (or "BTSC"), provides financial advisory services to domestic and international corporations and financial institutions. BT Wolfensohn focuses on providing objective advice for its clients on strategic transactions including mergers, acquisitions, divestitures, restructurings and joint ventures. The firm was founded by current World Bank President James D. Wolfensohn in 1981. Paul Volcker joined the firm as Chairman in 1988. The firm merged with BTSC in 1996 and Mr. Volcker currently serves on the Board of Directors of Bankers Trust New York Corporation, the parent of BTSC. The firm has approximately 100 professionals around the world, and over the last three years, has advised on transactions valued at over \$70 billion. In terms of restructurings, BT Wolfensohn's clients have included GPA Group, Olympia and York, Holiday Corp., VARIG Airlines of Brazil and Emery Air Freight.

BT Securities Corporation is one of the largest registered broker-dealers in the United States, with over \$1.3 billion of capital as of December 31, 1996. BTSC has developed world-class expertise in providing its clients with a variety of different financing options including public and private debt, syndicated bank loans and equities. The firm has particular strength in financing emerging growth and below investment-grade companies, and in the past five years has consistently ranked among the top underwriters of low-rated public debt. In the telecommunications sector in particular, BTSC has arranged financings for emerging growth companies in a variety of industries including WinStar Communications (38 GHz telephony), Wireless One (wireless cable television in the southeastern U.S.), CommNet Cellular (rural cellular in the western U.S.), MFS Communications (a competitive local exchange carrier), Rifkin Acquisition Partners (cable television), Sprint Spectrum (PCS), Ionica Plc (wireless telephony in the United Kingdom), International Wireless Communications (wireless telecommunications ventures in emerging markets in Asia and Latin America) and TV Filme (wireless cable television in Brazil).

BT Wolfensohn has been retained by NextWave Telecom Inc. to provide advice and assistance to the company in developing potential restructuring alternatives with respect to the company's C-block licenses. As part of this assistance, we have prepared the following analysis of financing considerations for telecommunications companies and their relevance to the current C-block license discussions.

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## **Overview of Telecommunications Financing Considerations**

This "Overview of Telecommunications Financing Considerations" analyzes market trends and several case studies in the telecommunications industry (primarily the wireless communications sector) to determine how past ventures have financed the start-up and build-out phases of their networks. This analysis is particularly relevant to the current state of the entrepreneurial C-block licensees. The objective of the presentation, therefore, is to illustrate the observations and conclusions we have drawn through reviewing relevant past examples and current market conditions. BT Wolfensohn's principal observations and recommendations are as follows:

- (i) During the start-up and build-out of network infrastructure, access to capital is one of the greatest challenges facing most telecommunications ventures;
- (ii) providers of capital often utilize equity and deferred debt service instruments given the inherent long-term nature of such projects;
- (iii) financial market conditions and sentiments heavily influence the availability of capital (including vendor financing);
- (iv) telecommunication start-ups must constantly revise their financing strategy and may often re-negotiate terms of outstanding obligations in response to volatile market conditions; and
- (v) the FCC can restructure the C-block debt in a manner that should assist C-block licensees in obtaining financing to enable the licensees to build out their networks.

### ***Section I. The Financial Life-Cycle of Telecommunications Ventures***

Section I of the attached presentation provides a detailed description of the financial life-cycle that telecommunications ventures typically experience. The presentation also discusses how competition for capital has increased with the emergence of new technologies and regulatory changes. Currently, there are several distinct telecommunications technologies (including wireline, cellular, PCS, ESMR, MMDS, LMDS, satellite telephony and others) competing for capital. The introduction of competitive auctions has significantly increased the number of competitors in each technology, but the increased cost of licensing has resulted in capital markets pressure.

Telecommunications start-ups generally go through three distinct phases of development that vary significantly in capital intensity and availability. The "start-up" phase demands significant capital investment in network design and construction. Ventures generally lack revenues and have negative cash flow and are, therefore, generally limited to private equity as a source of capital. Companies in this phase are typically dependent on venture capital and strategic corporate investors, as well as vendor financing. Some start-ups are also able to access mezzanine debt and the public equity markets, although these are much less frequent. High levels of competition for venture capital and volatile markets are additional complications that negatively impact telecommunications start-ups' access to capital.

The "build-out" phase also has substantial capital demands. During this phase, the network will be built out and the company may expand its service offering. Financing options, however, are constrained by the lack of (usually negative) cash flow. Several ventures have demonstrated strong revenue and subscriber growth during this period, but lower cost debt financing is usually

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reserved for companies with stable and proven cash flow. The "build-out" period is an intermediary stage in which ventures typically receive funding from vendors, financial institutions and commonly the public markets (both high yield debt and equity). Funding for this phase is highly dependent on the company's execution of its business strategy, its competitive position and trends in the financial markets.

During the "maturity" or "completion" phase, companies have limited financing needs that are usually linked to network maintenance. Large financing requirements are usually related to acquisitions or investment in research and development of new technologies or markets. Typically, access to bank loans and the public debt markets is closely tied to the company's ability to generate consistent cash flow and credible projections.

## ***Section II. Telecommunication Company Case Studies***

In Section II of the attached presentation, a detailed review is provided of the financing mechanisms used by four major telecommunications companies, MCI Communications, McCaw Cellular, Nextel Communications, and Omnipoint in financing their start-up and build-out phases. Each case highlights the importance of vendor financing, interest deferred debt instruments, public market participation and the ability to fund indefinite periods of operating losses.

The MCI case demonstrates how the company restructured terms with its suppliers and lenders at several different times. It also clearly reflects the importance of the company's preferred stock offerings during the "start-up" and "build-out" phases. Public market common equity was also a critical source of capital during the "start-up" phase and vendor support was important in MCI obtaining a bank facility that served as the primary financing during the "build-out" phase.

The McCaw Cellular (an early operator in the cellular market) case details how the company utilized interest deferred instruments during its "build-out" stage. The company also relied heavily on the public debt and equity markets for the majority of its financing and in 1989 a critical corporate restructuring helped it proceed to the "completion" stage.

Although Nextel Communications and Omnipoint have not completed their build-out, they have completed a substantial portion of their networks. It is important to understand the way they obtained the financing for this build-out. Nextel negotiated consent agreements with bondholders several times to restructure the terms of their initial financings. Nextel also prepared several alternative financing strategies that proved to be valuable when investors failed to provide an equity infusion during a critical capital-intensive period. Nextel also utilized deferred interest instruments, and leveraged vendor relationships in negotiating the company's bank facility.

Omnipoint illustrates how a network can be quickly and efficiently built when the bulk of its financial resources are dedicated to the development of its network rather than to financing license costs (Omnipoint received a "Pioneer Preference" license with respect to the New York MTA). It also demonstrates the effectiveness of a deferred interest instrument in the start-up and build-out phases, the importance of vendor financing and the ability of mezzanine financing (deferred dividend preferred stock) to increase financing flexibility.

## ***Section III. Considerations for C-block Licensees***

Section III includes a description of the special circumstances surrounding the C-block auction and a detailed analysis of the state of equity and high yield markets during and after the C-block

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auction. The FCC has a long history of fostering competition in new telecommunications industries, but previous industries were free from heavy license costs. In particular, cellular companies were awarded free spectrum and did not incur the same magnitude of acquisition costs as the C-block licensees. The A/B-block auction participants consisted primarily of large, well-capitalized companies with significant internal resources to fund license acquisition costs. Hence, the C-block licensees are the first new major telecom ventures created by the FCC to face the challenge of funding both license costs and network build-out.

Furthermore, as the latest entrants in the wireless telecom sector, the C-block licensees face a higher degree of competition than cellular or paging companies experienced, often in the form of well-entrenched and well-capitalized incumbents. The higher level of competition exists in the marketplace both for customers and sources of financing. This challenging competitive environment has been complicated by the financial environment since the C-block auction. Generally, the demand for C-block debt and equity has declined since the C-block auctions closed as evidenced by public market trading values of telecommunications companies similar to the C-block licensees and the D/E/F-block auctions. Both markets have been very sensitive to the threat of incumbent competition.

For example, Omnipoint's "total enterprise values (debt plus market equity less cash) per pop" have declined from the \$50-\$60 range in the Spring of 1996 to as low as \$15 in recent months (please see Section II of the attached presentation). The equity market value of public telecommunications companies similar to the C-block licensees have experienced a substantial deterioration since the C-block auctions. Market sentiments that C-block license valuations are currently below the auction prices paid have negatively impacted the ability of C-block licenses to raise equity financing.

High yield offerings have also proven to be a volatile source of capital for PCS companies. The high yield bond market has experienced a significant drop in demand for wireless issues since late 1996 and several planned offerings have been postponed (please see Section II of the presentation). No new C-block venture has been able to obtain high yield debt financing in 1997.

BT Wolfensohn has assisted NextWave in reviewing a number of possible restructuring alternatives that are intended to enable NextWave to access the public capital markets, and in particular, the high yield debt market, in order to finance its business plan. The principle objectives in the restructuring of NextWave's obligations are (i) a reduction of the cost of the licenses on a present value basis to a level which will be competitive with the license costs in the A- and B-block auctions; and (ii) a deferral in cash payments by NextWave under its license obligations for a sufficient period to permit NextWave's business to generate significant positive cash flow. BT Wolfensohn also believes that a successful restructuring from a capital markets perspective may need to address the actual and implied seniority of FCC debt obligations as well as specific FCC build-out and timing requirements.

The following two scenarios have been provided to illustrate the impact of changing the principle maturity and the interest accretion method of the FCC obligation. By altering these basic terms, we believe the FCC can effect a restructuring which should allow NextWave to gain access to the capital markets and proceed with its business plan.

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**Status Quo**

NextWave's FCC obligation currently provides that cash interest payments at a rate of 6.50% per annum will be made in 1997 through 2006 (Years 1-10). Quarterly principal amortization will occur in 2003 through 2006 (Years 7-10).

**Option A**

An alternative structure would allow NextWave to capitalize its interest payments and extend the term of principal repayment. In such a structure, interest would accrete at 6.50% each year (annually) from 1998 through 2005 (Years 1-8). In 2006 through 2017 (Years 9-20) annual interest payments would be made in cash and a final principal and capitalized interest payment would be made at the end of 2017 (Year 20).

**Option B**

Another alternative structure would allow NextWave to reduce its interest cost and extend the term of principal repayment. In such a structure the effective interest rate would be lowered to 0% in 1998 through 2000 (Years 1-3) and increase to 6.50% annual accreted interest in 2001 through 2004 (Years 4-7). Annual cash interest payments at 6.5% on the principal and accreted interest would be paid from 2005 through 2012 (Years 8-15). A final principal and accreted interest payment would be made at the end of 2012 (Year 15).

Principal reduction and pre-payment is another alternative that should allow NextWave to access the capital markets. However, the required amount of principal reduction on the FCC license obligations would be substantial resulting in a present value of these obligations below the cost of the A/B-block licenses. This approach would also necessitate a 2-year period before any required prepayment to provide confidence in the ability of the licensees to access the capital markets to fund both the prepayment of the licenses and other operating expenditures.

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## Key Conclusions from Prior Telecom Financings

**BT Wolfensohn has analyzed several case studies<sup>(a)</sup> to reach the following illustrative conclusions regarding nascent telecom ventures.**

- Telecom start-ups require enormous investments to fund the development of network infrastructure and operating losses.
- Although a variety of potential sources of financing are available, access to capital is one of the biggest challenges facing most telecom projects.
- Providers of capital to telecom start-ups recognize the inherent long-term nature in these projects and are often willing to provide equity or interest-deferred debt.
- During the start-up and build-out phases of telecom ventures, the availability of venture capital to fund the project is highly variable and may depend heavily on industry and financial markets conditions.
- Vendor financing is an important source of capital during the start-up and build-out phases. It, however, can be difficult to secure without clearly demonstrating a viable business model and prior financing.
- Telecom start-ups must constantly revise their financing strategy and may often renegotiate terms of outstanding instruments as their business plans change and to respond to volatile market conditions.
- The FCC can restructure the C-block debt in a manner that should assist C-block licensees in obtaining financing to enable the licensees to build out their networks.

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(a) Detailed case studies for MCI Communications, McCaw Cellular, Nextel Communications and Omnipoint are provided on pages 7-21 of this presentation.

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## I. THE FINANCIAL LIFE-CYCLE OF TELECOMMUNICATIONS VENTURES

## Financial Life-Cycle of Telecom Ventures

**Telecom ventures have several distinct phases of development with varying levels of access to financing.**

Phase	Start-Up	Build-Out	Completion
<b>Operational Characteristics</b>	<ul style="list-style-type: none"> <li>• Heavy investment in network design and construction</li> <li>• Limited service offering</li> <li>• Minimal, if any, revenues</li> </ul>	<ul style="list-style-type: none"> <li>• Continued network build-out</li> <li>• Expanded service offering</li> <li>• Substantial revenues</li> <li>• Limited, possibly negative cash flow</li> </ul>	<ul style="list-style-type: none"> <li>• Completed network</li> <li>• Maintenance capex</li> <li>• Broad service offering</li> <li>• Free cash flow</li> <li>• Eventual profitability</li> </ul>
<b>Financing Need</b>	<ul style="list-style-type: none"> <li>• Very High</li> </ul>	<ul style="list-style-type: none"> <li>• High</li> </ul>	<ul style="list-style-type: none"> <li>• Limited, except for acquisitions</li> </ul>
<b>Financing Sources</b>	<ul style="list-style-type: none"> <li>• <b>Financial/strategic equity investors</b></li> <li>• <b>Vendor financing</b></li> <li>• Mezzanine</li> <li>• Public markets (primarily equity)</li> </ul>	<ul style="list-style-type: none"> <li>• Financial/strategic equity investors</li> <li>• <b>Vendor financing</b></li> <li>• <b>Mezzanine</b></li> <li>• <b>Public markets</b></li> <li>• Bank loans</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Bank loans</b></li> <li>• Public markets</li> </ul>
<b>Key Drivers of Access to Financing</b>	<ul style="list-style-type: none"> <li>• Availability of venture capital</li> <li>• Market sentiment</li> <li>• Business model</li> <li>• Project timetable</li> </ul>	<ul style="list-style-type: none"> <li>• Business model execution</li> <li>• Customer acceptance</li> <li>• Revenue trends</li> <li>• Competitive position</li> <li>• Financial market trends</li> </ul>	<ul style="list-style-type: none"> <li>• Earnings/revenue trends</li> <li>• Long-term strategy</li> <li>• Industry outlook</li> </ul>



## Capital Access

**Debt and equity capital for telecom ventures has consistently followed the availability outlined below.**

	Start-Up	Build-Out	Maturity
<b>Debt</b>			
Vendor	<ul style="list-style-type: none"> <li>Available, but difficult to obtain.</li> </ul>	<ul style="list-style-type: none"> <li>Available to companies that have established a viable business model during start-up.</li> </ul>	<ul style="list-style-type: none"> <li>Limited, usually not available on attractive economic terms. Generally not used by mature businesses.</li> </ul>
Bank	<ul style="list-style-type: none"> <li>Not available due to lack of cash flow and tangible assets.</li> </ul>	<ul style="list-style-type: none"> <li>Available to companies with substantial cash flow.</li> </ul>	<ul style="list-style-type: none"> <li>Available.</li> </ul>
Public	<ul style="list-style-type: none"> <li>Generally not available due to lack of operating history and tangible assets.</li> </ul>	<ul style="list-style-type: none"> <li>Heavily dependent on market sentiment toward industry conditions, operating progress and market trends.</li> </ul>	<ul style="list-style-type: none"> <li>Available.</li> </ul>
<b>Equity</b>			
Private - Financial	<ul style="list-style-type: none"> <li>Usually the first to participate in nascent technologies. Annual returns exceeding 40% are sought.</li> </ul>	<ul style="list-style-type: none"> <li>Generally not utilized by companies that have been successful in the start-up phase.</li> </ul>	<ul style="list-style-type: none"> <li>Limited and usually not economic if build-out phase was successful.</li> </ul>
Private - Strategic	<ul style="list-style-type: none"> <li>Generally invest at higher valuation levels than financial investors. Long-term competitive advantage is the general rationale.</li> </ul>	<ul style="list-style-type: none"> <li>Limited, heavily dependent on competitive position of the venture and investor.</li> </ul>	<ul style="list-style-type: none"> <li>Limited and usually not economic if build-out phase was successful.</li> </ul>
Public	<ul style="list-style-type: none"> <li>Heavily dependent on market sentiment toward technology, business prospects and market trends.</li> </ul>	<ul style="list-style-type: none"> <li>Heavily dependent on market sentiment toward industry conditions, operating progress and market trends.</li> </ul>	<ul style="list-style-type: none"> <li>Available but subject to industry conditions and market trends.</li> </ul>

## Competition for Capital

Competition for capital has substantially increased with the emergence of new telecom technologies. Additional demand has also been created by the introduction of spectrum auctions.

	1970 - 1979	1980 - 1989	1990 - Present
<b>Market Segments Competing for Capital:</b>	<ul style="list-style-type: none"> <li>• Wireline</li> </ul>	<ul style="list-style-type: none"> <li>• Wireline</li> <li>• Cellular</li> <li>• Paging</li> </ul>	<ul style="list-style-type: none"> <li>• Wireline</li> <li>• Cellular</li> <li>• PCS</li> <li>• ESMR</li> <li>• MMDS</li> <li>• LMDS</li> <li>• CLEC</li> <li>• Paging</li> <li>• WCS</li> </ul>
<b>FCC Assignment Method:</b>	<ul style="list-style-type: none"> <li>• Facilities Authorized/Licenses Awarded</li> </ul>	<ul style="list-style-type: none"> <li>• Facilities Authorized/Spectrum Awarded</li> </ul>	<ul style="list-style-type: none"> <li>• Combination of:               <ul style="list-style-type: none"> <li>- Auctions</li> <li>- Pioneer Preferences</li> <li>- Awards</li> </ul> </li> </ul>

### Deferred Interest Instruments<sup>(a)</sup>

Deferred interest securities have proven to be an important source of financing for wireless ventures during the "start-up" and "build-out" phases in which cash flow is severely limited as shown in the following examples.

Selected Issuers	Issue Date	Amount (\$ in mm)	Non-Cash Period	Description
McCaw Cellular	June 1988	\$250.0	4.5 years	11.95% Convertible Senior Discount Debentures
Intercel	February 1996	360.0	5 years	12% Senior Discount notes due 2006
	March 1996	150.0	NA	Convertible Preferred Stock
	March 1997	45.0	NA	Convertible Preferred Stock
Centennial	1992	128.0	No required dividends for 5 years	Mandatory redemption in 2007. 7.5% Cumulative Preferred Stock
Nextel Communications	August 1993	525.9	5.5 years	11.50% Senior Discount notes due 2003
	February 1994	1,126.4	5.5 years	9.75% Senior Discount notes due 2004
Clearnet Communications	December 1995	367.0	6 years	Senior Discount notes due 2005
	February 1997	353.0	2 years	Vendor financing
Globalstar	March 1996	300.0	Dividend Payable in Common Stock	6.5% Convertible Preferred Equivalent Obligations
Omnipoint	1995	382.5	2 years	Credit facility with Northern Telecom which includes a portion due June 1997 that can be used for working capital purposes including interest payments on the facility.
Aerial Communications	November 1996	226.2	Until maturity	Zero-coupon notes due 2006.
Sprint Spectrum	August 1996	500.0	5 years	Senior Discount notes due 2006

<sup>(a)</sup> from public documents.

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## II. TELECOMMUNICATION COMPANY CASE STUDIES

## Case Studies

**After examining and researching a broad universe of telecom ventures, we narrowed our sample to four case studies:**

Company	Key Issues	Relevant Period
MCI Communications	<ul style="list-style-type: none"> <li>• Successfully competed against larger incumbents</li> <li>• Utilized new technologies</li> <li>• Tremendous cash needs</li> </ul>	1973 - 1981
McCaw Cellular	<ul style="list-style-type: none"> <li>• Nascent cellular industry had several similarities with current PCS industry</li> <li>• Market value fluctuated over time culminating in a merger with AT&amp;T</li> <li>• Underwent corporate consolidation/restructuring</li> </ul>	1984 - 1993
Nextel	<ul style="list-style-type: none"> <li>• Amended several bondholder agreements</li> <li>• Has undergone several rounds of financing</li> <li>• Attracted important strategic investors</li> </ul>	1990 - 1996
Omnipoint	<ul style="list-style-type: none"> <li>• Pioneer Preference licensee of PCS technology</li> <li>• C-block and D/E/F-block auction participant</li> <li>• Established vendor and other financing before leveraging licenses</li> </ul>	1993 - 1996

## MCI Communications Corporation (1973-1981)

### Company Description

**MCI Communications over the subject period faced severe competition and regulatory constraints. Between 1973 and 1981, the company developed a network encompassing fiber optics, digital microwave and digital switching. MCI has developed into a major participant in the telecommunications industry.**

### Key Financing Steps

- Renegotiated terms with suppliers and lender at several different times.
- Used several preferred stock offerings.
- Public market financing was an important source of capital.
- Vendor financing was a necessary pre-condition in obtaining bank facilities.

### Financial Summary

(\$ in millions)	1973 <sup>(b)</sup>	1974 <sup>(b)</sup>	1975 <sup>(b)</sup>	1976	1977	1978	1979	1980	1981
<b>Operating Data</b>									
Revenues	--	--	\$6.8	\$28.4	\$62.8	\$74.0	\$95.2	\$144.3	\$234.2
EBITDA			(13.1)	(1.4)	27.7	25.0	30.6	37.2	51.3
Interest Expense			(11.6) <sup>(e)</sup>	(15.5)	(18.4) <sup>(f)</sup>	(20.5)	(23.4)	(24.1)	(27.4)
Net Income			(38.7)	(27.2)	(1.7)	2.5	3.5	7.1	18.7
Capital Expenditures	0.4 <sup>(c)</sup>	0.8	1.7	39.7	24.3	22.2	52.5	110.3	155.7
Depreciation & Amort.	0.0 <sup>(d)</sup>	NA	4.3	9.2	10.0	11.2	13.4	18.3	27.2
<b>Capitalization</b>									
Current Pay	NA	9.1	9.1	154.1	176.8	173.0	179.1	204.5	282.6
Vendor Finance <sup>(a)</sup>	NA	NA	NA	NA	NA	NA	NA	NA	NA
<b>Total Debt</b>	5.5	9.1	9.1	154.1	176.8	173.0	179.1	204.5	282.6
Preferred Stock	2.6	0.0	0.0	0.0	0.0	0.0	0.8	0.7	1.1
Shareholders' Equity	38.4	60.2	54.4	(32.2)	(29.1)	(22.7)	11.5	78.1	147.0
<b>Total Capitalization</b>	46.5	69.3	63.5	121.9	147.7	150.3	191.4	283.3	430.7

(a) Suppliers were critical to MCI obtaining its bank credit agreement.

(b) Only information on parent company; no financial data available for consolidated entity.

(c) 1973 capital expenditures include total amounts from the date of incorporation to the September 30, 1972.

(d) Depreciation and amortization for 1973 reflects total amounts from date of incorporation to April 1972.

(e) 1975 net income does include costs of discontinued construction of microwave sites and development costs acquired.  
(f) 1977 net income includes \$2.0 million extraordinary gain on the acquisition of N-Triple-C debentures.

**MCI Communications Corporation**  
(continued)

**Financing History**

Date	Financing Instrument
Pre-1972	\$64.0 million bank credit agreement and \$7.1 million from common stock and warrants
Pre-1972	\$5.0 million owed from mostly equipment contracts
May 1972	\$2.7 million in proceeds from sale of preferred and common stock
June 1972	\$33.0 million in common stock offering (net proceeds of \$29.8 million)
June 1972	\$500,000 promissory note with a private foundation (non-cash pay for 1 year)
June 1972	\$1.1 million in 7.5% subordinated notes due June 1977 (cash pay)
1973/1974	Issued \$2.3 million in 7.5% notes due June 1988 (cash pay)
1974	\$5.5 million in 9% convertible junior notes due July 1978 (cash pay)
1976/1977	\$6.7 million in Series B Preferred Stock
1976/1977	\$8.4 million in 8% convertible debentures (cash pay)
1976/1977	\$135 million in capital leases and \$14.2 million in other leases
March 1977	Amended terms of the bank facility agreement increasing the facility to \$98 million
December 1978	Proceeds of \$28.6 million from issuance of convertible preferred stock
September 1979	Proceeds of \$69.5 million from senior cumulative preferred stock (redeemed May 1981)
July 1980	\$52.5 million of 15% subordinated debentures due 2000
October 1980	Proceeds of \$51.4 million from preferred stock offering
January 1981	Increased bank facility to \$200 million
April 1981	\$125 million of 14.125% subordinated debentures due 2001

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## MCI Communications Corporation (continued)

### *Start-Up Phase*

- In 1966, the FCC ruled that MCI was qualified to provide services. In 1969, the FCC ruled that MCI could operate but gave no assurances that it could expand its network or connect to the Bell companies. After appealing, AT&T withdrew its arguments, and MCI began service in 1972.
- To raise funds for the initial build-out of its network, MCI turned to the public markets and its vendors. In 1972 it had aggregated \$11 million of parent company MCI common and preferred stock and \$11 million under vendor finance arrangements.
- The company's \$64 million bank credit facility was used toward financing the initial construction and the acquisition of equipment for the MCI system. Over the next three years, MCI planned to expend \$80 million for the purchase of radio and multiplexing equipment, \$15 million for antennas, batteries and engine generation; and \$15 million for towers and construction related expenses.
- The 1972 preferred stock offering had a mandatory payment of dividends where cash payments could be deferred, although accruing annually. Bechtel Corporation, a major investor, bought 100% of the first preferred stock issue. MCI completed an IPO in June 1972; shares issued prior to that date were to a limited group of investors. The \$1.1 million in promissory notes were issued to a group of former stockholders. A portion of these funds were used for the build-out of its networks.
- The \$2.3 million 7.5% notes issued in 1973/1974 were to Baker, Fentress and Company.

### *The Build-Out Phase*

- By 1973 MCI's network reached more than 40 cities but could not provide switched services, which had to be connected to the Bell system. By May 1974, the FCC ordered AT&T to provide MCI with a full range of required interconnection facilities and services.
- The company's ownership was 25% owned by the CEO and the President of MCI. Other major shareholders, whose ownership includes warrants purchased, were New Court Private Equity Fund and O.D.C. Equities Inc.
- Certain stockholders, in 1973, agreed to modify their holdings in specific MCI carriers and accept parent company common stock. In connection with the transaction stockholders agreed to lend MCI funds in exchange for 7.5% subordinated notes (with warrants).
- The Series B Preferred Stock offering was issued to acquire the 8% convertible subordinated debentures. MCI, because of its accumulated deficit and the terms of its Bank Facility arrangement, could not pay cash dividends so the dividends on preferred stock accrued. The September 1979 preferred stock was subsequently issued to retire this series.
- MCI later revised its credit agreements with the banks to increase its borrowings to \$98 million and to extend its 2.5 year repayment schedule to a seven-year term. MCI had to also rearrange terms with various suppliers, who had partially guaranteed the Credit Facility.
- By March 1977, revenues from the sales of communications services had increased by 121%. Increasing interest expense was attributable to equipment leasing financing.
- The 9% convertible junior note had anti-dilutive provisions built-in. The holder of the note is an affiliate of Bechtel. Additionally, the convertible debentures are convertible into N-Triple-C stock.
- During the next two years to 1978, several court decisions enabled MCI to offer usage sensitivity services without regulatory constraints and with access to local interconnection facilities. Percentage change in expenses grew faster than revenues during this period, largely as a result of MCI's decision to incur additional expenses to expand its customer base.
- The company used capital leases of \$3.1 million for other equipment and leasehold improvements, and \$55.9 million for communications system in service.
- The Series B Cumulative Convertible preferred stock allowed for the acquisition of the outstanding 8% convertible debentures. In 1978, the 9% convertible junior notes and the 7.5% notes were repaid in full.
- The December 1978 preferred stock offering was used to reduce debt by \$20.0 million and obtain \$6.0 million for working capital purposes. Part of the proceeds went to pay down \$12.9 million of secured debt under its credit agreements.

### *Completion Phase*

- In June 1980, the court dismissed AT&T's counterclaim against the company and rendered a judgment in favor of the plaintiff of \$1.8 billion which represented damages of \$600 million tripled as required by anti-trust law. At this stage, MCI had established itself as a major telecom player.
- The Revolving Credit Agreement was renegotiated from the second bank agreement to increase the commitment to \$200 million.
- MCI is now a major competitor in the long distance telephone market, providing consumers valuable savings from increased competition.



## McCaw Cellular (1984-1993)

### Company Description

**McCaw Cellular Communications was an early provider of cellular mobile telephone service. The company experienced explosive growth through several acquisitions. In September 1994, McCaw Cellular was acquired by AT&T Corporation.**

### Key Financing Steps

- Interest-deferred discount bond assisted McCaw's successful build-out.
- Depended on the public markets substantially.
- A corporate consolidation/restructuring facilitated access to public equity markets.

### Financial Summary

(\$ in millions)	Fiscal Year Ended December 31,									
	1984 <sup>(a)</sup>	1985 <sup>(a)</sup>	1986 <sup>(b)</sup>	1987	1988	1989	1990	1991	1992	1993
<b>Operating Data:</b>										
Revenues	\$0.3	\$7.4	\$17.8	\$196.4	\$310.8	\$504.1	\$1,037.5	\$1,365.6	\$1,743.3	\$2,194.8
EBITDA <sup>(e)</sup>	(0.2)	(9.2)	(18.9)	(60.8)	(7.0)	52.1	301.3	460.6	644.7	663.7
Interest Expense	(0.0)	(3.6)	(23.5)	(108.1)	(199.1)	(238.7)	(496.6)	(578.0)	(490.0)	(394.2)
Net Income	0.1	(12.9)	(38.5)	(88.7)	(297.0)	(288.5)	(355.8) <sup>(d)</sup>	(429.7)	(285.6)	(312.0) <sup>(e)</sup>
Capex <sup>(j)</sup>	0.1	73.9 <sup>(c)</sup>	360.8 <sup>(c)</sup>	721.0	239.9	345.8	1,681.2	531.1	394.7	594.9
Depreciation & Amort.	0.0	7.3	16.9	80.8	156.4	202.9	252.9	344.6	385.2	403.6
<b>Capitalization</b>										
Vendor Financing		9.4	121.6	143.0	146.1	149.8	--	--	--	--
Current Pay		18.0	445.9	877.1	1,489.6	1,384.8	5,018.7	4,974.5	5,374.3	5,148.7
Deferred Interest		--	--	--	195.0	217.8	243.5	272.4	279.0 <sup>(f)</sup>	--
<b>Total Debt</b>		27.4	567.5	1,020.1	1,830.7	1,752.4	5,262.2	5,246.9	5,653.3	5,148.7
Redeemable Preferred Stock		--	--	--	--	--	902.3	1,036.6	1,170.9	1,305.2
Minority Interests		0.5	64.1	52.4	39.0	28.7	--	--	--	--
Shareholders' Equity	15.8	2.5	(63.8)	116.6	(11.1)	1,004.0	2,044.7	1,774.7	(409.7)	(37.9)
<b>Total Capitalization</b>	NA	\$30.4	\$567.8	\$1,189.1	\$1,858.6	\$2,785.1	\$8,209.2	\$8,058.2	\$6,414.5	\$6,416.0

(a) 1984 and 1985 Financials may not reflect the consolidation of certain subsidiaries.

(b) 1986 uses restated numbers (for income statement and certain balance sheet numbers).

(c) 1985 and 1986 includes PPE acquired in business combinations as well as significant increases in working capital.

(d) 1990 excludes gain on sale of the company's cellular interests in Kentucky, Alabama and Tennessee.

(e) 1993 excludes gain on sale to Associated Communications Corporation of the A Block cellular systems in New York.

(f) 1992 deferred interest debt based on BT Wolfensohn estimates.